

minimum period of time, the droplet adhering to the laminate through, at least in part, surface tension.

**56.** A method according to claim 54, further comprising transporting the droplet on the laminate, by virtue of motion of the movable surface, through an environmentally controlled delay line prior to performing the at least one operation on each droplet.

**57.** A method according to claim 47, wherein the moving surface moves continuously.

**58.** A method according to claim 47, wherein the moving surface moves in a discontinuous start/stop action.

**59.** A method according to claim 47, wherein analyzing includes performing at least one operation from the group of operations consisting of optical interrogation and mass spectrometry.

**60.** A method according to claim 59, wherein the step of analyzing includes applying at least one of fluorescence spectrometry, Raman spectroscopy and UV absorption.

**61.** A method according to claim 59, wherein analyzing includes hanging each droplet from the laminate for at least some period of time, the droplet adhering to the laminate through, at least in part, surface tension.

**62.** A method according to claim 47, further comprising tracking each droplet on the moving surface.

**63.** A method according to claim 62, wherein tracking each droplet includes using at least one sensor from the group of sensors consisting of a position sensor and a drop sensor.

**64.** A system for high throughput processing of a plurality of droplets, the system comprising:

- a) a movable surface that is substantially unperforated;
- b) a dispenser for dispensing each droplet onto the surface; and
- c) a delay line for moving the surface such that the each droplet hangs from the surface for at least a specified minimum period of time, the droplet adhering to the surface by virtue, at least in part, of surface attraction.

**65.** A system according to claim 64, wherein each droplet has a volume smaller than one microliter.

**66.** A system according to claim 64, wherein the movable surface moves continuously.

**67.** A system according to claim 64, wherein the movable surface moves in a discontinuous start/stop action.

**68.** A system according to claim 64, wherein the delay line includes a pulley system such that the surface moves back and forth in a confined area.

**69.** A system according to claim 64, wherein the delay line includes a drum that rotates, such that the surface travels around the drum in a confined area.

**70.** A system according to claim 64, wherein the delay line includes an environmental chamber, for subjecting the droplet dispensed on the surface to a controlled environment.

**71.** A system according to claim 64, wherein the surface has at least one customized surface property from the group of surface properties consisting of cleanliness, biocompatibility, surface energy, binding affinity, porosity, chemical interaction, chemical addition, sample information encoding, and tracking.

**72.** A system according to claim 64, further including an analyzer, for analyzing a characteristic of each droplet.

**73.** A system according to claim 72, wherein the analyzer is a mass spectrometer.

**74.** A system according to claim 64, wherein the moving surface is a conveyor belt.

**75.** A system according to claim 64, further comprising a laminate that is spooled onto the moving surface, such that the droplet is dispensed onto the laminate.

**76.** A system of high throughput processing of a plurality of droplets, the system comprising:

- a) a moving surface;
- b) a dispenser for dispensing each droplet onto the moving surface; and
- c) a tracking system for tracking each droplet's position.

**77.** A system according to claim 76, wherein the moving surface moves continuously.

**78.** A system according to claim 76, wherein the moving surface moves in a discontinuous start/stop motion.

**79.** A system according to claim 76, further including a microtiter plate handling system for receiving data identifying at least one microtiter plate, retrieving a particular microtiter plate based on a received command, and presenting the particular plate for dispensing.

**80.** A system according to claim 76, wherein the tracking system includes a recorder, for measuring and recording information pertaining to each droplet's position on the moving surface.

**81.** A system according to claim 80, wherein the recorder includes random-access memory.

**82.** A system according to claim 76, wherein the tracking system includes a position sensor for associating each droplet with a fiducial position on the moving surface.

**83.** A system according to claim 82, wherein the position sensor is a rotary encoder.

**84.** A system according to claim 82, wherein the tracking system includes at least one drop sensor.

**85.** A system according to claim 84, wherein the at least one drop sensor is positioned at a known position such that upon the at least one drop sensor detecting each droplet, the known position can be verified against each droplet's fiducial position and position information obtained from the position sensor at each droplet's time of detection.

**86.** A system according to claim 85, wherein the at least one drop sensor is located at an interface to an analyzer.

**87.** A system according to claim 85, wherein the at least one drop sensor is located at a substrate station.

**88.** A system according to claim 85, wherein the at least one drop sensor is located at a reactant station.

**89.** A system according to claim 76, wherein the tracking system includes at least one drop sensor.

**90.** A system according to claim 76, further including an environmental chamber, for subjecting the droplet dispensed on the surface to a controlled environment.

**91.** A system according to claim 90, wherein the environmental chamber includes a delay line.

**92.** A system according to claim 91, wherein the delay line includes a pulley system such that the moving surface moves back and forth in a confined area.

**93.** A system according to claim 91, wherein the delay line includes a drum that rotates, such that the moving surface travels around the drum in a confined area.

**94.** A system according to claim 86, further including an analyzer for determining a characteristic of each droplet.